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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,829	04/09/2004	James M. Minor	10030215-1	1398

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EXAMINER	
SKOWRONEK, KARLHEINZ R	
ART UNIT	**PAPER NUMBER**
1631	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/821,829	**Applicant(s)** MINOR, JAMES M.	
	Examiner Karlheinz R. Skowronek	**Art Unit** 1631	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

Continuation of 11. does NOT place the application in condition for allowance because: The argument presented by applicant is not persuasive.

Regarding the rejection of claims 1-13 under 102(b) over Singh et al, Applicant argues that the prior art fails to teach the limitation of a plurality of characteristic signatures from measurements taken from samples taken from successive locations along a determined profile of locations through the heterogeneous tissue.

Singh et al teaches taking a plurality of samples from tissue obtained from radical prostatectomy (208, col. 1, prostate tissue samples, line 1-3). Singh et al teach 65 prostate specimens were determined to have tumor on opposing sides of the specimen and 52 were used to in the analysis (204, col. 1, results tumor vs normal classification, line 5-6, p208, col. 1, Prostate tissue samples, lines 4-5). This is interpreted to mean that normal tissue was bounded on opposite sides by tumourous tissue in the removed prostate specimen and reads on the limitation of a "plurality of samples taken from a heterogeneous tissue region". Further giving the claims their broadest reasonable interpretation, the teaching of Singh et al taking two samples, one of normal tissue and one of diseased tissue, from each of the 52 prostates obtained teach the limitations of the claims reciting a plurality. Singh et al teach obtaining gene expression profiles from tumor and normal tissue samples using microarrays of 12,000 genes (p204, col. 1, results tumor vs normal classification, line 6-11). The 12,000 genes on the array are viewed to read on the plurality of properties recited in the claims. The gene expression recited by Singh et al reads on the characteristic signature as instantly claimed. Singh et al make correlation between Gleason score (GS) and the measured gene expression profiles. Teaching specifically that a readily detectable and statistically significant signature of GS exists (p. 206, col. 1, para. 2, line 7-9). Singh et al also teach gene expression signature profile composed of a plurality of gene expression signatures of GS (p.204, col. 2 para. 2, lines 1-5). Singh et al provide a trend profile for the second type of tissue and perform a statistical analysis on each of the characteristics signatures First, Singh at al teach profile of a second tissue determined along the profile of locations in providing a "normal" gene expression profile (p204, col. 1, results tumor vs normal classification, lines 8-10). Second, the statistical comparison between the particular gene measures in normal versus tumor tissue (p204, col. 1, results tumor vs normal classification, para 2, line 3-7). Third, Singh et al teach ranking the profile signatures (p204, col. 1, results tumor vs normal classification, para 2, line 1-3). Thus providing rank ordered characteristic signatures as in claim 1.

Applicant also argues that the expression profiles of Singh et al are not anticipatory of the instantly claimed characteristic signatures. This is not found persuasive. The specification does not explicitly define "characteristic signatures". The specification recites "characteristic signatures characterize one of the plurality of properties" and characteristic signatures are formed using the measured plurality of properties" (specification, [0006] line 7-8). A gene is interpreted to be a property and gene expression is interpreted to be a characteristic signature. Based on the guidance provided by the specification, Singh et al teaches obtaining gene expression data (characteristic signatures) from normal and tumorous samples for 12,000 genes (properties). The samples in Singh et al are taken from predetermined locations in the prostate specimen because the samples were taken from regions in the specimens that were tumorous and non-tumorous.

Applicant argues that no trend profile is used to compare any characteristic signature. The specification teaches the trend profile is typically known from a conceptual knowledge of the disease state and that the comparison involves comparing the trend profile with each differential expression signature using statistical analysis (Specification, [0058], sentences 1-2). In view of the guidance from the specification, Singh et al teach the correlation of the differential gene expressions signatures to the trend profile of the of the Gleason score (GS), an indicator of prostate cancer progression (p. 204, col 2, "prediction of pathological features...", para 2, lines 2-5).

Applicant argues that the instant invention is further distinguished from Singh et al because the instant invention takes samples from successive locations of the same heterogeneous tissue region. Analogous to the instant invention, Singh et al takes samples from two successive locations from the same prostate specimen.

Thus the rejection of claims 1-13 as anticipated by Singh et al under 35 USC 102(b) is maintained.

Regarding the rejection of claims 1-10, 12-13 and 17-20 as anticipated by Crosby et al under 35USC102(e).

Applicant argues that Crosby et al doe not teach the limitations of the independent claims 1, 17, and 18. This is not found persuasive.

Crosby et al teach obtaining a plurality of samples from patients having positive and negative disease outcomes [0025] reading on the plurality of samples. Crosby then detects the phosphorylation statuses of a plurality of signaling proteins [0025] reading on forming a plurality of characteristics. Reading on the limitation of measuring from a plurality of samples take from a heterogeneous tissue region, Crosby et al teach the analysis of multiple sequential tissue slices [0080]. Crosby et al teach determining the correlation of protein activity (characteristic signature) and a disease outcome (trend profile)[0092] and identification of the best (most highly correlated, i.e. rank ordered) biomarkers [0094] reading on providing a trend profile, performing a statistical analysis on each of the characteristic signatures with regard to the trend profile, and rank ordering the characteristic signatures.

With regard to the limitations of claim 17 of a computer readable medium and 18 a system, Crosby et al teach automatic analysis using high-throughput automation [0013].

Thus the rejection of claims 1-10, 12-13 and 17-20 as anticipated by Crosby et al under 35USC102(e) is maintained

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PRIMARY EXAMINER